

User Instructions for Electrode E16

Measuring Moisture in Hard Building Materials such as Concrete, Tile, Grout, Brick and other Cementitious Materials with mini-Ligno S/DC and DX/C, Lignometer K and VersaTec

Electrode E16 is used to obtain instant moisture measurements of hard building materials, tile, stone, brick and concrete slabs up to 7" deep. The indicated values are not absolute moisture percentages, but they give comparable moisture values when measuring different locations at different depth levels.

Place E16 electrodes 4 1/2" apart. Connect the meter and choose setting #0 for mini-Ligno S/DC and DX/C and setting #106 for Ligno-VersaTec and Lignometer K. Relative moisture values are indicated between 0 and the maximum range of the meter.

If there is an area available, where you know the material is dry, measure the area and use the value as a base value to compare to all other measurements.

Measurements with pin and pinless meters are considered qualitative measurements, they indicate higher and lower moisture levels. For quantitative measurements to decide whether or not to install a resilient floor covering, the RH in-situ test is recommended by the NWFA and most flooring manufacturers.

For surface measurements: Insert the pins up to 1/4" deep. Tap on electrode head with a mallet.

For depth measurements: Use EL pins up to 7" deep with the Electrodes E16. Drill 2 holes 4 1/2" apart about 3/16" in diameter approximately as deep as you want to measure. Insert the pins further about 1/4" by tapping on top of the E16 and take a measurement. If you are using un-insulated pins, make sure the same area of the pin is touching the concrete. If the contact area between pin and concrete changes from measurement to measurement, you could get inconsistent values. Readings could be different even when testing materials with the same moisture content. Concrete and other building materials display high conductivity even at low moisture levels. Therefore, the contact area between the pins and the material to be measured should be the same to produce comparable readings.



Use mini-E16 cable to connect mini-Lignos
Use E16 cable to connect Lignometer K and Ligno-VersaTec.

Additional Tests

Pinless meter measurements: Ligno-Scanner SDM, Ligno-DuoTec BW and Ligno-VersaTec can be used to evaluate the upper section of a concrete slab. Measurements reach 1/4" and 3/4" deep. Works good for water damage applications.

The plastic sheet test requires covering an area 25" x 25" with a plastic sheet. Allow the concrete to "breathe" for 24 hours and examine the surface of the concrete and the inside of the plastic.

The Calcium Chloride test is basically an advanced plastic sheet test, where the area measured is defined by the cover and the amount of evaporation is weighed.

The RH in-situ test: Recommended by floor manufacturers and the NWFA. Lignomat offers a line of RH meters and accessories, which conform to the ASTM standard F2170 for RH testing of concrete slabs to decide whether or not a resilient floor covering can be installed.



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